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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,208

10/29/2003

Jay R. Walton

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER

CUMMING, WILLIAM D

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

03/10/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No. 10/696,208	Applicant(s) WALTON ET AL.	
	Examiner WILLIAM D. CUMMING	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the each and every step as stated in the claimed method of claims 1-11 and the computer readable storage medium storing computer code and the computer to recover data as stated by claim 21 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 27-32 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

Software instructions or codes or programs are nonphysical things but claims 27-32 claims just nonphysical things, instructions, comprising a physical device, a processor, which is impossible.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 21-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not originally support and inadequately describe the now claimed a computer readable storage medium storing computer code in which the code indicates to the computer to recover data as stated by claims 21. The specification only supports a memory storing software code in which the code indicates to the processor or controller to recover data.

7. Claims 21-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide an enabling disclosure for the computer code as stated by claim 21 and the instructions to process a received signal to provide data samples, instructions to transform the data samples in the frequency domain in accordance with a particular transformation to provide transformed samples, instructions to de-spread the transformed samples with one or more sets of de-spreading coefficients to provide de-spread samples,

wherein each set of de-spreading coefficients is associated with a respective de-spreading code that corresponds to a spreading code used to spread data prior to transmission and selected from a set of available spreading codes, instructions to combine the de-spread samples for each time interval to provide a demodulated symbol representative of a transmitted OFDM symbol and instructions to decode demodulated symbols to provide decoded data as stated by 27 since these codes or instructions are not disclosed and is only known to the inventors . In computer applications, it is not unusual for the claimed invention to involve two areas of prior art or more than one technology, e.g., an appropriately programmed computer and an area of application of said computer. *White Consol. Indus.*, 214 USPQ at 821. In regard to the "*skilled in the art*" standard, in cases involving both the art of computer programming, and another technology, the examiner must recognize that the knowledge of persons skilled in both technologies is the appropriate criteria for determining sufficiency. See *In re Naquin*, 398 F.2d 863, 158 USPQ 317 (CCPA 1968); *In re Brown*, 477 F.2d 946, 177 USPQ 691 (CCPA 1973); and *White Consol. Indus. v. Vega Servo-Control, Inc.*, 214 USPQ 796, 822 (S.D.Mich. 1982), *aff'd on related grounds*, 713 F.2d 788, 218 USPQ 961 (Fed. Cir. 1983). In a typical computer application, system components are often represented in a "*block diagram*" format, i.e., a group of hollow rectangles representing the elements of the system, functionally labeled, and interconnected by lines. Such block diagram computer cases may be categorized into (A) systems which include but are more comprehensive than a

computer and (B) systems wherein the block elements are totally within the confines of a computer. The first category of such block diagram cases involves systems which include a computer as well as other system hardware and/or software components. In order to meet his or her burden of establishing a reasonable basis for questioning the adequacy of such disclosure, the examiner should initiate a factual analysis of the system by focusing on each of the individual block element components. More specifically, such an inquiry should focus on the diverse functions attributed to each block element as well as the teachings in the specification as to how such a component could be implemented. Based on such an analysis, the examiner has reasonably contend that more than routine experimentation would be required by one of ordinary skill in the art to implement such a component or components, that component or components is specifically be challenged by the examiner as part of this 35 U.S.C. 112, first paragraph rejection. Additionally, the examiner has determine whether certain of the hardware or software components depicted as block elements are themselves complex assemblages which have widely differing characteristics and which must be precisely coordinated with other complex assemblages. Under such circumstances, a reasonable basis does exist for challenging such a functional block diagram form of disclosure. See *In re Ghiron*, 442 F.2d 985, 169 USPQ 723 (CCPA 1971) and *In re Brown, supra*. Moreover, even if the applicants has cited prior art patents or publications to demonstrate that particular block diagram hardware or software components are old, it should

not always be considered as self-evident how such components are to be interconnected to function in a disclosed complex manner. See *In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 301 (CCPA 1974) and *In re Forman*, 463 F.2d 1125, 1129, 175 USPQ 12, 16 (CCPA 1972). Furthermore, in complex systems including a digital computer, a microprocessor, or a complex control unit as one of many block diagram elements, timing between various system elements may be of the essence and without a timing chart relating the timed sequences for each element, an unreasonable amount of work may be required to come up with the detailed relationships an applicant alleges that he or she has solved. See *In re Scarbrough*, 500 F.2d at 566, 182 USPQ at 302. For example, in a block diagram disclosure of a complex claimed system which includes a microprocessor and other system components controlled by the microprocessor, a mere reference to a prior art, commercially available microprocessor, without any description of the precise operations to be performed by the microprocessor, fails to disclose how such a microprocessor would be properly programmed to either perform any required calculations or to coordinate the other system components in the proper timed sequence to perform the functions disclosed and claimed. If, in such a system, a particular program is disclosed, such a program should be carefully reviewed to ensure that its scope is commensurate with the scope of the functions attributed to such a program in the claims. See *In re Brown*, 477 F.2d at 951, 177 USPQ at 695. Since, the disclosure fails to disclose any program and more than routine experimentation would be required of one

skilled in the art to generate such a program, the examiner clearly has a reasonable basis for challenging the sufficiency of such a disclosure.

8. Claims 27-32 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a well known asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

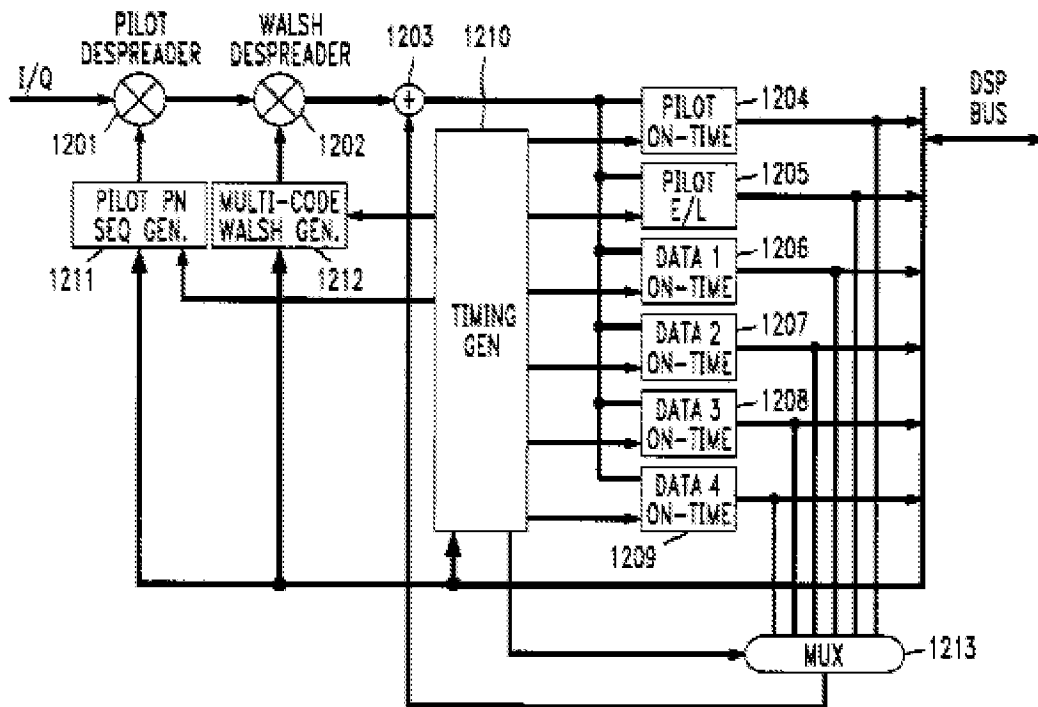
10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1, 2, 5-8, 12, 13, 15-21, 23-25, 27, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang, et al** in view of **Fasel** as stated in paragraph 3 of the Office action dated October 3, 2008.

FIG. 12



13. Claims 3, 4, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang** in view of **Fazel** as applied to claims above, and further in view of **Agee** as stated in paragraph 4 of the Office action dated October 3, 2008.

14. Claims 3, 4, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang** in view of **Fazel** as applied to claims above, and further in view of **Agee** as stated in paragraph 4 of the Office action dated October 3, 2008.

Response to Arguments

15. Applicant's arguments filed December 30, 2008 have been fully considered but they are not persuasive.

The analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for an Examiner can take account of the inferences and creative steps that a person of ordinary skill in the art would employ. The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility. One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims. When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads

to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under §103. *KSR INTERNATIONAL CO. v. TELEFLEX INC.* 82 USPQ2d 1385.

In response to applicant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicants' attorney states that transforming the input of **Haung** in the frequency domain prior to dispreading would render the FWHT unit **Huang** inoperable. Also attorney argues **Huang** would be rendered inoperable because a Fourier transform were placed in the system of Huang before dispreading. The Examiner can not just take the word of the attorney. The attorney **MUST** supply evidence to support his arguments. So far the attorney has not. Attorney's arguments can not take the place of evidence.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

16. DUPLICATE COPY OF FORMS FOR FEE PROCESSING NO LONGER REQUIRED

Numerous United States Patent and Trademark Office (Office) forms utilized for making fee payments in regard to an application, a reexamination proceeding or a patent include language requesting a duplicate copy of the form for fee processing. In the past, the duplicate copy of the form was needed as the paper application file would be in one area of the Office while the processing of the fee would be done in another area of the Office. It is current Office procedure to scan forms containing an authorization to charge or credit a fee amount to a deposit account into the Image File Wrapper (IFW) of an application, a reexamination proceeding or a patent. Once the form is scanned into IFW, it is available and viewable throughout the Office for, *inter alia*, fee processing. As a result, there is no longer a need for the duplicate copy. Office forms (e.g., PTOISBIO5; PTOL-85B; PTOISBII6; PTOISBII7i; PTOISBII7p; PTOISBII8; PTOISB119; PTOISBI22; PTOISBI24A; PTOISBI29; PTOISBI30; PTOISBI3 1; PTOISBI32; PTOISBI37; PTOISBI43; PTOISBI45; PTOISBISO; PTOISBI56; PTOISBR7; PTOISBI58; PTOISBI65; PTOISBI66; PTOISBI94; PTOISBI13PCT; and PTO-1390) will be revised to remove the request for a duplicate copy of the form for fee processing. In the event that a duplicate copy of a form is needed for fee processing (e.g., the form has not been scanned into IFW or the form is submitted in a security application), the Office will make the necessary copy of the form for fee processing. Inquiries concerning this notice may be directed to James Engel, Senior Legal Advisor in the Office of Patent Legal Administration, at (571) 272-7701 or at PatentPractice@uspto.gov.

17. If applicants wish to request for an interview, an *"Applicant Initiated Interview Request"* form (PTOL-413A) should be submitted to the examiner prior to the interview in order to permit the examiner to prepare in advance for the interview and to focus on the issues to be discussed. This form should identify the participants of the interview, the proposed date of the interview, whether the interview will be personal, telephonic, or video conference, and should include a brief description of the issues to be discussed. A copy of the completed *"Applicant Initiated Interview Request"* form should be attached to the Interview Summary form, PTOL-413 at the completion of the interview and a copy should be given to applicant or applicant's representative.

18. REMINDER FOR ALL REGISTERED PATENT ATTORNEYS AND AGENTS PLEASE UPDATE YOUR CONTACT INFORMATION

As a registered patent attorney or agent, you will in the near future be able to self-manage your contact information online, at the United States Patent and Trademark Office's (USPTO) website link dedicated to the official roster of attorneys and agents.

How to Update

The following are the steps to get started on self-managing your information.

1. By March 1, 2009 - Please check the current roster to ensure that your business mailing address is accurate. If it needs to be changed, please provide the USPTO's Office of Enrollment and Discipline (OED) with your current business mailing address. ("How To Correct Your Information" steps are detailed below.)
2. OED will mail to you a password. Separately, OED will mail you a valid user identification. Thus, you should expect two mailings. OED plans to mail the password and valid user ID to all practitioners after March 1, 2009.
3. After you receive your password and valid user ID, you will be able to change your address and telephone number information, as well as input your e-mail address. OED will not insert or change a practitioner's e-mail address. To avoid unsolicited spamming and communications, a practitioner's e-mail address will not be made public.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM D. CUMMING** whose telephone number is 571-272-7861. The examiner can normally be reached on Tuesday- Friday, 11:00am-8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM D CUMMING/
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